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Nature talks on economics

Chicago

1912

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Nature Talks on Economics

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By CAROLINE NELSON

CHARLES H. KERR & COMPANY
PUBLISHERS CHICAGO

Nature Talks on Economics

NATURE TALKS ON ECONOMICS

A Manual for Children and Teachers in Socialist Schools

308
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BY
CAROLINE NELSON

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CHARLES H. KERR & COMPANY
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A WORD TO THE TEACHER

The lessons in this book were originally given to the Young Socialist Sunday School in San Francisco. The children were much interested, especially in the objects used such as crystals, minerals, eggs, flowers and seaweeds. The teacher who undertakes to teach these lessons must, of course, inform herself. The workers cannot afford to have their children taught by anyone who does not know what she or he is teaching. To carry a socialits card in one's pocket does not entitle anyone to shape the mind of the young. But there is nothing in the lessons that a person with an ordinary mind cannot grasp. Nor does he need to wade through volumes of doubtful matter. In our days there is scarcely a town or village which does not have a public library with a good encyclopedia and dictionary, and equipped with them a student can inform himself on the technical points. The proletarian philosophy should furnish him with the ethical and social side of the lessons. The first volume of Marx's Capital, Morgan's Ancient Society, Ward's Ancient Lowly and last but not least, Prof. Veblen's Theory of the Leisure Class, should be read and in a measure mentally digested. The above named books are scientific works based upon industrial and historical investigation, which form a workingclass philosophy and an ethical system of thinking that is diametrically opposite to the rulingclass philosophy and ethics as taught in our schools and churches, which are purely sentimental notions formed to protect and uphold things as they are, and to justify them. The rulingclass philosopher and moral sentimentalists teach that each individual is a free agent to do good or evil as he pleases. The proletarian philosopher shows that man is a creature of his environment, that he thinks and acts in terms of his own interest, or what he conceives to be his interest. Therefore, preaching about beauty and goodness to the individual in a society based upon competition is useless. Teach him how in co-operation with his fellow workers he can institute a society based upon industrial and economic equality, which naturally abolishes the class struggle based upon conflicting class interests, and you fire the child's mind

with a natural, simple truth that he never forgets, because all his experiences will confirm it.

The organic structure in nature, built of the individual cell life, with the group divisions of different activity furnishes a realistic illustration of what practically goes on in human society by the division of labor, with the difference that the cell groups work in perfect harmony with one another, and interchange their products according to their needs. The human group workers, on the other hand, make the fearful mistake of tolerating parasites in their system of division of labor. Parasites that are all the more deadly and dangerous because they are of their own species, and can therefore impress the minds of the group workers with the idea that they could not get along without them, while they steal their product from them to pile it up to rot and decay while the workers die of starvation. When the child mind grasps this you have made a man and woman out of it and begun to build a new society from the bottom up, and these lessons are but a feeble beginning.

Do not fear that the child mind cannot understand the matter. We grown people are used to feed the child on silly stuff under the impression that it cannot understand real things. The child-mind grasps things much quicker than the grown mind because it is plastic. A child can learn a new language with an ease that astonishes a grown person who laboriously tries to study it. Moreover, the childmind is very sensitive. The earnestness that is in the teacher's mind conveyed to the child without any effort.

The greatest difficulty the teacher will have will be with the child whose parents are what may be termed half-baked-socialist. They have let go of the old and been unable to grasp the new. All Socialism means to them is so much ballot-box stuffing. To them, all individuals are the limit of selfishness and must be controlled by law and fear. The children listen to their parent's remarks and get a hazy view of the thing.

One young boy in the class became very angry because we would not allow that stealing was an occupation in the division of labor under capitalism. He also stoutly maintained that to adulterate food under the present system was all right or you couldn't compete with the other fellow. On the other hand the child coming from the home of the scientific, revolutionary parents have a view and grasp of life, and true, ethical perception that shows what can be done with the childmind. We had two such children in the class. They were David Milder's little boy and girl. They

were such thoughtful, well-instructed youngsters that I cannot refrain from mentioning them here. The best teachers are the parents, in fact, the only true teachers must necessarily be the parents. Therefore, this is directed as much to the parents as the teachers. The teacher or parent that informs himself will have no trouble in informing the children. The child learns to understand scientific terms with the same ease that he learns any other word that he uses and think in terms of. But I cannot too seriously warn anyone against the folly of trying to teach something which he does not understand. He stunts the little mind and simply bewilders it. There is no necessity for such bungling business in our day. Information has not only become concentrated, but so cheaply put up, that any ambitions person can get hold of it. And that a half-baked Socialist that brings rulingclass, high-sounding doctrines within our camp is allowed to ply his trade is one more deplorable fact that workers have to contend with, chiefly for lack of something better to hand. We can only sincerely hope that this little book will be a signpost on the road to information for both parents and teachers who have the shaping of the little minds in their charge.

CAROLINE NELSON.

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Nature Talks On Economics

I

EVOLUTION AND REVOLUTION

Early one Sunday morning a carpenter with his two children, Johnny and Anna, went to the woods to saw down a tree. The little folks chatted away, asking all sorts of questions.

"Papa, do the flowers sleep?" asked Anna.

"I think they do," said the father. "They fold their petals and droop their heads in the night."

"Why don't they wake up when we go by?" went on the little chatter-box.

"They don't wake up," said the father, "because they have no eyes or ears to see and hear with. If they had they would pull thmselves up by the roots and run about."

"They would be funny plants," said Johnny with a laugh.

"They would no longer be plants, they would be animals," said the father. "All animals have grown out of the plant life. They didn't like being tied to the soil."

Just then they were passing a bush that grew by the roadside. Somewhere in the bush there was a great fluttering and screaming of birds. They all stopped and peered into the bush. They saw a bird's nest around which the father and mother birds were circling in distress. In the nest were two tiny baby birds. They were red-skinned, without any feathers.

Their heads seemed to be too big for them to carry. In the nest was also a tiny egg, and, as they looked, it cracked and out of it came another baby bird. Johnny and Anna both screamed, they were so excited. And the birds screamed because a little one had dropped out of their nest. The father picked it up from a twig, where it was hanging by one leg, and replaced it in the nest.

"How did the birds grow inside the eggs?" asked both the children.

"The egg," said the father, "is a storehouse of food with a center of life. We don't know what life is. We only know that it is always active, and always changing. First, the yolk of the egg is divided into little sacks, so small that we couldn't see them with our naked eye. The different organs are built out of this prepared material, very much as our cities are built out of lumber, bricks and many other materials. It may be that there are fairy carpenters, plumbers, bricklayers and many other workers at work building the bird. But whatever it is that does this work, it means to give out energy. And energy can only be restored by food. When the food in the egg is gone the builders in the egg must find food in some other way. But these builders had no bosses. They built the bird in co-operation. They became the bird. What one part of the bird needed the whole needed. The governing seat was the head, in the brain. Every part of the organism called for action. There was a revolt against living any longer in an egg-state. It meant death and starvation. 'Strike down the wall!' was the cry. And the bird did something he had never done before; he moved his head and struck blow after blow."

"Then he came out," said Johnny with glee.

"Yes, he came out," said the father, "because he didn't remain quiet, and say—'It is no use. I have always been in an egg and therefore always shall be here until I die.' All life has come up from a mere speck, and labored mightily until it so changed that it had to find a new way of living. This laboring mightily is evolution. The cry—'Strike down the wall!' is the cry of revolution. Life in its onward march has struck down a thousand walls. The workers are the world's mighty builders. They have labored night and day. They have built railroads, steamships, telegraphs, telephones, factories, machinery, and delved in the bowels of the earth for coal to run the whole business, until today we have a mighty organized world. But the working-class is in a shell of Capitalism. What they have built a few idle rich claim as their private property. Every day the workers have less and less food. The army of people who can find no work grows larger and larger; all around the world is heard the cry of revolution for us workers. Strike down the wall of capitalism! is our cry. We must have food or die. And we shall not die while we produce food in plenty."

"What is Capitalism, papa?" asked Johnny.

"Capitalism," said the father, "is a condition in which there goes on a regular system of stealing from the workers what they make. When the workers make a hundred dollars' worth of goods they only get twenty dollars in wages. The bosses get the eighty dollars for doing nothing. But here we are. This is the tree," said the father. "We shall see how many birthdays it has had, after I get it sawed down, and see how it built itself up."

II

THE WONDERFUL CRYSTAL BUILDER

Anna and Johnny ran on down a dry creek-bed, while the father sawed away on the tree; very soon they both came running back.

"Papa, see what we have found," they called out, coming as fast they could run.

"What is it?" asked the father, and stopped his work.

"I think it is a diamond," said Johnny, handing the father a stone that glistened in the sunlight. The father examined it closely, then said:

"No, children. It is a piece of crystalized rock. You remember what I told you about life? It is always active and always changing. Here life is building a mineral. Before there was any plant or animal, there was the whole mineral world."

"How is the mineral built, papa?" asked Anna.

"When we build anything we use different kinds of material—lumber, bricks, iron, lime and so on. Nature, too, uses different kinds of stuff in whatever she builds. We can't see gas. But the whole earth and the oceans and rivers, plants and trees and animals, everything is built up from this gaseous material. We have found out that there are sixty different kinds of stuff, or elements. Each kind has a different name. We won't bother about the names today. In our bodies all the elements are used, but in this crystal only two kinds are used. It is transparent. It is built in the shape of a cube capped with a pyramid. The plan of the square and triangle was followed."

"Triangles and squares," said Anna, "those are what we build in the kindergarten."

"Yes," said the father, "it seems that nature goes to kindergarten in the mineral condition. But we must come back to the question of how nature builds the crystal. Well, suppose your teacher wanted to drill you for marching. She would line you up—two, three, four, five, six or more abreast, and form squares or columns, where each boy or girl has a certain place and must keep step with all or the lines are broken. The crystals are built of little particles called molecules; they line up, forming squares and columns. But remember the molecules have no front or back, or up and down form. They always begin to build from a center."

"Are they like beads, papa," asked Anna.

"It is a good way to think of them in that form," said the father. "Only remember the molecules are active and full of life. It takes millions of these little fellows to build a crystal, and sometime they get into bad temper and quarrel with one another."

"Then they get angry like people; is that what you mean?" asked Johnny.

"We shall see. Water, too, is formed out of molecules, but of another kind. When it is warm the water molecules, like so many fairy-imps, run singing and dancing down the creek; but when it gets cold they draw closer together, forming a solid mass of ice."

"Yes, papa," said Johnny, "I have seen tiny ice needles on the top of water before it freezes over."

"You have seen them, too, begin to form on the window-pane. How? Well, a room is always pretty full of water-molecules, but they are so far apart that we can't see or feel them. When they come near the

cold window they get chilled and rush close together, forming drops of water on the pane that crystalize. They line up into ice needles that start from many different centers on the window. Their points meet at a thousand different angles, until the crystal molecules have made a beautiful design. But the least warm breath will break them up. Now crystals are built like that, only the mineral crystals are much stronger than the water crystals. It takes them much longer time to build, and you can only break them up by a hot fire. But they are quick to feel either heat or cold, too. If one set of these little crystal builders get chilled working, they draw closer together than those who remain in the warmer condition. Then there may be a crystal quarrel that shows in broken lines and a spoiled crystal."

"But people don't quarrel and get bad tempered because some are warm while others are cold," declared Johnny.

"People quarrel over different things," said the father, "but nearly all fights can be traced to the struggle for possessions of a nice warm corner in life, which means to have plenty to eat and nice clothes and houses and leisure. That is what is called success. But all these things are only produced by labor. Labor produces all the wealth, but the capitalists take it, leaving labor barely enough to live on. This gives us two classes of people that are always quarreling. The more wealth anyone has the more power he has, and power gives honor and fame. So the capitalists are always quarreling among themselves to get from one another the wealth they have filched from the working class."

"The crystal builders don't eat, do they, papa?" asked Anna.

"No, children. If our bodies were transparent like crystal all we would have to do would be to keep in a warm place, because the warmth could go right through us. Our bodies are hollow caverns with an engine inside that must be kept up by shoveling fuel into its firebox—the stomach. Three times a day we have to fill it up with food to get heat enough to give us strength and energy. To work means to give out energy, so the workers need a good deal more food than the rich idlers, but they get much less. They are always using up their last pound of steam for energy, and they are worn out when they should be in full bloom of manhood and womanhood Suppose we were fairies sailing through the air at noon hour. Out around the mines, mills and factories and in the fields we would see workers at lunch, eating hunks of bread with cold meat or cheese and a piece of cold pie, and sometimes there is neither meat or pie. In half an hour or an hour the whistle blows, and every worker runs back to his task. We would then have time to peep into the fine houses and places where the rich idlers lunch. There we would find steaming hot food served in many courses, finished off with fruits and ices. The workers' daughters and sons run about waiting on them, having been busy all morning cooking the food. The idlers take plenty of time to eat; there is no whistle to blow for them. Do they love the cooks and people that wait on them and make their lives so comfortable? No. They call them low menials. As fairies we would weep to see such terrible injustice, and would want to show men how foolish the whole business is and tell the workers to

keep the wealth they produce and let idlers take care of themselves. But, as people, we say: 'It has always been this way and therefore it always will be'."

"But aren't some workers idlers, too?" asked Johnny.

"Yes, my son, nobody likes to be a slave and driven like a horse, which is the condition of the workers. Still, the workers keep at their tasks most heroically. But you see this is a machine age. A machine is a labor-saving tool used by the workers in common. Every year the machine improves and saves more labor, so that fewer and fewer workers can get jobs The workers therefore fight over getting jobs. If anyone doesn't like his job there are a half dozen ready to jump into it This makes the bosses very hard-hearted. So to get better conditions at all, the workers have to strike, then the half-starved people who are out of work are given a chance to work as scabs. The strikers have to fight the scabs to win, but it would be much better for all the workers, whether they have a job or not, always to stand together instead of fighting one another in the interest of their bosses. So you see we are forced to fight one another for the warmth of life, which is very foolish because there is plenty for everybody."

III

PRIMITIVE, NATURAL AND SOCIAL LIFE

The next week the mother took Johnny and Anna to the ocean beach. There they went on board a steamer bound for a little island. When they reached the island, they heard a man on the end of the pier calling out:

"Come and see the marine-gardens in our glass-bottom boats!"

"Oh, mamma, won't you take us?" they both asked.

"All right," said the mother.

They stepped into a boat which had a pane of glass in the bottom, like a window in a house. Through it they could see the water underneath the boat. Around this boat-window was a fence. Everybody sat around this fence and looked down in the deep, but at first they could see nothing. It looked like a black well.

The boat soon moved into clear water and then they saw the most wonderful garden anyone could imagine, down in the bottom of the ocean. Gold and silver coated fish swam in and out among the swaying plants and trees. These plants and trees were blue-green, red and golden brown in shining colors. Some of them looked as delicate as spider-webs; others sent great trunks and branches up to the surface. All swayed to and fro, as though each plant and tree bowed to one another in the most polite fashion.

"What a beautiful garden!" exclaimed Anna.

"I didn't know anything like that could grow in the bottom of the sea," said Johnny.

"It is seaweed," said the mother. "Seaweed is the first form of plant-life as we know it. You learned how the crystal was built by molecules. These builders in the crystal built a very rigid, stiff and hard thing. The builders in the seaweed have learned a lot more, and use many more elements in their work. You can see the seaweeds are all growing upward, stretching out for light and spreading out leaves to catch it all the time. But, after all, the builders here are only doing on a grand scale what was learned in the mineral. Remember the leaves and branches the molecules build on a frozen window. If there hadn't been builders of mud-huts, we could never have had any palaces nor twenty-story buildings. It was in the mud-hut that our builders learned the rule."

"I wish I could pick some of them," said Anna, pointing down in the sea.

"There are lots of them thrown on the beach," said Johnny.

The garden now disappeared and the boat bumped up to the wharf. The children ran ahead of the mother to the beach. Anna took up a handful of seaweed, but dropped it in great disgust.

"Oh, mamma, they are slimy, and not a bit pretty like they are in the water," she said.

The mother took a little knife from her bag and made a slit in the round stalk of a seaweed, and out came a clear juice that looked like a thin syrup.

"Is it seaweed blood?" asked Johnny.

"Yes, we may call it blood," said the mother, "but you see it has no color. It has a long name—*protoplasm* it is called. We must remember that or

we can't learn anything about plant life. This protoplasm is the builder of plants. It is made up of many kinds of molecules. All around themselves they build a wall, then we have a cell. All plants are built up of millions of these cells."

"And when things grow bigger and bigger, is it 'cause the cells grow bigger and bigger?" asked Anna.

"The cells accommodate themselves to the general plan of the plant-structure," said her mother. "Here in the stalk they are formed like a pipe or tube and grow end to end. In a straw you can see just where the cells are joined together, but here in the seaweed the ends are absorbed, so that the stalk is one smooth hollow pipe. If we had a glass we would be able to see the protoplasm circulating up and down in it."

"But where do the cells come from?" asked Anna impatiently.

"I am just coming to that," said the mother. "Suppose we tie a sack in the middle; we would get two sacks instead of one. Suppose each of those two sacks had the power to swell until each one was as big as the first sack. Then we could divide the two into four, and the four into eight, and the eight into sixteen, and get thousands of sacks. Well, that is just what happens in the plant or any growing body. The cells come from division."

"I don't see any roots," said Johnny, carefully examining some of the seaweeds.

"They have no roots," said the mother. "Each cell takes care of itself and finds its own food. Roots would mean that some cells would be busy digging in the ground, while others would be busy catching air and sunlight. Others would have to carry the

salts and stuff dug out of the ground to the top of the plant. Still other cells would have to carry stuff from the air down to the roots. It would mean a division of labor that could not be carried out in the sea-condition. When the plant builders had learned to co-operate by dividing labor, they came to a point where the sea hindered them in every way, and they had to get out of it. It was a great plant-revolution, no doubt, to grow on the shore instead of in the sea."

"How did the little seaweed builder ever learn all that?" asked Anna.

"They learned very much like people, I suppose," said the mother. "There are currents in the ocean and the seaweed drifts. As it drifted it learned to poke its head out of the water. The cell-builders had to adapt themselves to new conditions by different ways."

"But I don't understand about those plant-builders learning like people," said Johnny. "Haven't people always known how to build houses and make clothes and cook food?"

"No, children, the first dwelling place was a cave. The first clothes were made of the skin of an animal, and the first weapons were stones and sticks. Man couldn't cook his food before he learned that by rubbing two dry pieces of wood together in a certain way he could make fires. Man first lived in warm climates, but when colder climates overtook him he had to protect himself by finding out how to clothe himself. Necessity forced him onward. The human family learned that if one man made shoes all the time he could do it much better and quicker than another man who had little or no experience along that line. So it was with everything. Then we naturally divided ourselves into different working groups to get things done in the best and easiest way. Then we learned that everything depended on good tools, and that the people with the best tools could beat all the rest. Then we learned to hitch our tools to steam, next we learned that many people could make a certain thing much better and quicker when each took a special part. Today more than a hundred shoe workers are needed to make a pair of shoes.

"So it is with everything. We make everything co-operatively, therefore we should own everything co-operatively, instead of individually. Like the seaweed builder we will have to revolutionize ourselves by getting out of the sea of capitalism into the pure air of social co-operation."

IV

THE BEGINNING OF SEX

The mother and the children had taken a rest on the beach, and the first boat was getting ready to leave for home, but Johnny and Anna were not ready to go. They wanted to go up in the canyon close by, and their mother finally allowed them to.

When they came back Anna had her hands full of ferns, but Johnny had nothing. He admitted that he had been hunting birds' nests.

"Don't you think that the birds are very beautiful?" asked the mother.

"Sure, mamma."

"What do you want to destroy them for, then?"

"Just for fun," said Johnny, looking very much ashamed.

"If it were not for the birds," said the mother, "the farmers couldn't raise fruits, vegetables or grain. The bugs would eat everything up before it had time to ripen."

Anna sat down by her mother's side to arrange her ferns, and discovered the spores on the back of the fronds.

"Oh, mamma," she said, "what are those brown things, all in a row on the fern's back?"

"They are seeds," answered the mother.

Johnny came and looked, too. "What are they for?" they both asked.

"Now let us be very quiet for a moment," said the mother, "and try to learn something about them. The seaweed floats in the water. It grows by cell-

division. Each cell is enclosed in a wall, but this wall is like a fine sieve, through which the protoplasm draws in its food and throws out what it doesn't need. Before there was any beautifully colored and shaped seaweed, the sea swarmed with life. But we could not very well have seen it, because it was all colorless lumps of jelly. Small pieces of this jelly dropped off and grew into other lumps. Nothing new was born and nothing old died. There were no mammas and papas in that kind of world.

"But when the seaweed appeared, it was the form of stem, branches and leaves. All the cells were firmly united. The seaweed reproduced itself first by forming a branch that dropped off and grew into a new seaweed. But when the seaweed found itself in colder water, where it was not easy for it to get food, it began to reproduce itself by forming eggs, which in that form are called spores. This spore was first a single cell dropped in the water. It was provided with a lot of food and paddles, and rowed about until it found a safe shelter, and by the time it had eaten its food, it was able to care for itself, and to go on growing to be like its seaweed mother."

"But there came a time when it was still harder for the seaweed to find food; then it dropped two cells, instead of one. One was a father-cell and the other a mother-cell. The father-cell is called male and the mother-cell female. The mother-cell got a lot of food. The father-cell got none on leaving home, but it had a lot of energy, and started to hunt the mother-cell. As soon as the two cells came together they became one, and there was a new egg or spore formed, ready to grow into a new seaweed.

So we see that the same individual in the seaweed is both mother and father."

"And is this fern both mother and father?" asked Anna, holding one up in her hand.

"Yes, children, and the brown things in rows at the back of the frond or leaves, which you asked me about, are spores. They are not swimming spores, but are fastened to the parent fern with a spring, which holds them in spore-cases. When the spores are big enough to care for themselves—bang! goes the spring, and they are scattered in every direction, where they take root and grow into baby-ferns."

"What about birds?" asked Johnny puzzled. "Isn't there a father-bird and a mother-bird?"

"Oh, yes, children, but there is a long leap in the evolution of life from the fern family to the bird family. The birds have many different organs. They have eyes for sight, and nostrils for smell, and tongues for taste, and lungs for breath, and stomach for digestion, and many other organs. So also they have sex-organs to reproduce themselves. The egg laid by the mother-bird is, like the female cell in the seaweed, supplied with a large amount of food. The father-bird produces the male-cell which enters the egg in the mother before it is sealed up with a shell and laid in the nice, soft nest, built by both the father and the mother-birds."

"Why do the birds sit a long time on their eggs before they are hatched, and become baby-birds?" asked Anna.

"Because, child, the life-germ within the egg cannot be active without being kept warm. It just sleeps when it is cold. That is why the mother-bird

can lay one egg after another and then hatch them out together."

"The birds love their babies a great deal more than the seaweed and the fern love theirs, don't they, mamma?" asked Johnny.

"The birds have so much more power of expressing their love," said mother. "They can fly about to hunt for food for them, and guard them from danger. That is what higher evolution means—the power of expressing the indivdual, acting with other individuals, to get what is needed or wanted.

"Human parents need a lot more things for their babies than the birds do. But the working-class parents have no free access to nature. The father has to sell his labor in the market for wages, to get whatever is needed for the family. But the market is nearly always over-stocked, so he and other workers form unions to protect themselves from being forced to sell below a living. But the unions they have formed can't always protect them, and in many fields of labor the worker has no union, or the bosses have broken them up. So the working-class father often has to take a wage that is too small to buy the barest necessities of life. Then the mother has to go out and hunt for work, too, leaving her babies uncared for. The mother thus torn away from her babies suffers terribly, and the father loses hope, and the babes cry and pine in cheap, dark rooms, which the mother has no time to clean. And the whole family is ruined. Nice, respectable people don't like to look at these ruined homes and families. They are often too ignorant to know the cause, and say to the cheated workers, 'you are poor because you are shiftless and extravagant and because you

drink. If you were faithful to your masters and loved God, you would all be happy and contented.' That is nice preaching to millions of workers who have no time to care for their babies nor to love them. Don't you think so, children?"

V

SEX AND ADAPTATION

Bright colors of flowers dotted the fields and waysides. Sweet perfumes scented the air, and Anna and Johnny and their father were sitting by the wayside enjoying themselves. The bees were buzzing about from flower to flower.

"The bees are the flowers' messengers," said the father, as they watched one going in the throat of a flower. He picked one and plucked out the petals showing the children the pistil in the center, and the stamen in a circle around it.

"The pistil is the flower lady and the stamen is the flower man," said the father. "You can see how Mr. Stamen holds out packages of yellow powder or pollen. Miss Pistil is poking her head out, as though she were looking for something. And so she is. She is looking for a message from a Mr. Stamen, living in another flower. And Mr. Stamen is looking for a messenger to take his message—the pollen, to carry it to Lady Pistil. So the flower flags a messenger, very much like we flag a train with bright colors."

"Is that why flowers have such bright colors?" asked Anna.

"Yes, that is why they have such glaring, bright colored petals, so that the bees can see them. But to be doubly sure of hailing a messenger, they send out a perfume which the bee can smell miles off. So the bee knows in what direction to fly to find them. The bee, however, does not waste its time running

errands for the flowers for nothing. You see it has the care of its own family to look after. Here you seen a drop of honey away down the throat of the flower. That is for the bee, and placed so that the little rascal gets loaded with pollen. Then it goes to another flower and unloads some of it on the head of the pistil, and gets more pollen, going on and on, very much as a postman delivers mail and takes it up at the same time.

"Why do the flowers go to so much trouble about messages?" asked Johnny. "Are they not as well off without them?"

"Well, children, you know that we are very anxious to have the postman come along, when we are waiting for letters. Our postman is only one of thousands throughout the world, carrying messages from one person to another. Then, too, we have newspapers publishing messages from all over the world. We can learn only by finding out from experience. But everybody is having different experiences and learning different things. This learning may be very valuable to all the members of the human family and must be handed on, or we should all go stumbling on, each being forced to find out everything for himself, instead of being helped by all the information gathered by our forefathers, and our fellow men. We have a co-operative way of learning, but we did not always have that. Before we had discovered how to read and write, all our messages had to be passed from mouth to mouth, and before we had learned to talk, there was no co-operative way of learning. The plants had to learn to exchange knowledge, too. But they first had to have conditions giving them different experiences.

When the plant family first crept out of the sea, it dotted the sandy shores, and each plant had very much the same experiences. It reproduced itself by spores. A spore means a seed formed without any flower."

"Mamma told us a spore was formed by a mother and father cell," said Anna.

"I am glad, Anna, that you remember so well. Now let us see what we can learn about the flowers. When the plant family spread inland over hills and dales, some of them got into shady nooks, others were in the scorching sun, others in terrific wind, others were nearly drowned in wet soil, while still others were high and dry. But in each condition the plant had to make the best of it. It had to adapt itself by learning how to protect its life in these various ways, or go out of existence. The members of the plant family had their different experiences and learned things in life useful to all of them,—therefore the messages.

"How are the flower messages written? We shall see. At the base of the pistil are tiny eggs,—mother cells. At the top of the stamen is pollen,—father cells. Both mother and father cells are impressed with the experiences of their ancestral parent plant. The pollen is carried by the bee to other plants. It enters the pistil and unites with the mother cells or eggs. The flower's mission is over. It drops. The eggs begin to grow, and form a pod. When the plant's eggs are ripe we call them seeds. The pod opens and the seeds are ready to grow into baby plants. The lessons of two ancestors are combined, and can be used by the growing plant in building itself up. In this way the members of a whole plant

family exchange experiences generation after generation. A generation means the yearly crop of new seeds. Each year the seed brothers and sisters in a pod have a new line of hereditary lessons to go by. But they can only bring into use those lessons which their present conditions permit. The plants like people have to adapt themselves to circumstances. A gardener knows this, if he is a good gardener, and he makes conditions for his plants which will enable them to express those lessons or qualities that he desires. Many gardeners of human life—parents and teachers—make themselves believe that a child can control his condition, and they always preach to him. Instead of changing the conditions, they want to change human nature."

"The flower feeds the bee on honey for its work, but when the flower drops off, where does the bee get anything to eat?" asked Johnny.

"Oh," said the father, "go and look in any beehive in the summer or fall and you will find it stored with honey. The flower postmen lose their jobs in the winter, but it doesn't bother them. The flowers made plenty of food for them. All they had to do was to carry it home. And home they carried it. The flowers and the bees believe in giving service for service; but man believes in getting something for nothing, which he calls Profit. He hires his fellow-man only to make a profit out of him. When he can make no more profit out of him he says "Go." The hired man loses his job when the work is over, and he has no storehouse. The full storehouse he helped to fill by his service belongs to people who never give him any service in return. The food may rot in the storehouses, but the workers that filled

them may die of starvation. That is the condition the workers are asked to adapt themselves to today, while those who claim the filled storehouses are supposed to be the survival of the fittest. But the moment the workers get sense enough to use what they have produced, they themselves become the fittest, and our hog condition disappears with its hog nature."

VI

SEX, ITS USE AND ABUSE

One morning Anna went out into the wood-shed. She saw the pussy cat crawl in behind the wood-pile and heard some feeble mewings. What can it be? she thought, and went to look.

"Kittens!" she exclaimed. Back of the wood-pile she saw a nest with many dark, rolling objects in it. She called her mother and her brother to come and see what she had found. They both came in a hurry.

"Mamma, where did the cat get her babies?" was the first question Anna asked.

"You remember what papa and I told you about seaweeds, ferns, flowers and birds?"

"Yes, mamma," said Anna. "They all have eggs. Their babes come from eggs, but kitty had no eggs."

"Kitty had eggs," said the mother, "but they stayed in her body. There they were kept snug and warm, until they were ready to be born, just like the bird grew in the egg, because the mother-bird kept it warm in the nest by sitting on it. We have learned that evolution means to labor to build something, and that the builders learn to do things easier and better all the time. This easier and better way is progress. It is better for a mother to give life to her babies by carrying them in her body than by sitting on a nest. It gives the mother freedom to hunt for food all the time to keep herself in good condition, and meantime the growing little ones are much better protected."

"Does it take the cat a longer time to hatch out her babies than it takes the bird to bring out its young ones?" asked Johnny.

"Yes, certainly," said the mother. "The more advanced in evolution an organism is, the more wonderful are the plans which are carried out in its construction, and the longer it takes the builders to complete it. So we see that it is really a necessity in nature to have the advanced animal mothers carry their babes in their bodies, or they would have to sit on nests such long periods of time that they would suffer in health, and there would be no more progress along that line."

"Is it the way we came into the world?" asked Anna, wonderingly.

"Well," said the mother, "you are not birds or fishes. A human being is the highest advanced animal only because it has learned thousands of better ways of doing things. The animal that learned to walk on its hind legs in order to use its two fore-legs to work and fight with became human and learned to make tools and weapons. These tools and weapons always suggested better and easier ways of doing things, until his mind became more and more active. That is all. The human mother carries her young in her body, just like an animal mother carries hers."

"Then it is not true," said Johnny, "what a boy told me. He said that his mother told him that a stork brought him, and that is the way children come into the world."

"No, that is not true," said the mother.

"Why did the boy's mother tell him such a foolish thing," asked Johnny.

"Before you can understand why she did that, you will have to learn a little of the history of the human family. You see the animals do not enslave one another; nor do they prey upon members of their own kind. These wicked things are done by the human race alone, because human beings alone use tools. The woman, way back in tribal times, found out how to make clothes and cook food and raise vegetables, but the man only knew how to hunt and fight. Tribe warred with tribe and took each other prisoners, but the prisoners were for a long time adopted as members of the conquering tribe. When women became industrially useful, the man who captured a woman in war claimed her as his slave, to compel her to cook his food and to make his clothes for him. After that it became a custom for all the men to capture or buy women. In time all women became slaves and were regarded inferior to men. The woman lost all rights. As a child her father owned her; as a grown woman her husband owned her. No man is fit to be master of another man, but much less is a man fit to be master of a woman, for that means that he is master of her sex. Where we have a master and a slave we really have two slaves. The master became the slave of his desires. This state of affairs brought about sex-slavery. The sex-organs were misused, and whenever one of our organs are abused it becomes diseased. The human race became ashamed of its sex. Parents thought it was best to hide everything about sex. They imagined that ignorance is a good thing and thought it was so much nicer for a child to believe that a bird brought him into the world, instead of his own mother."

"I should think a boy would love his mother much better for having her bring him into the world, instead of a stork doing it," said Johnny.

"That is not all," said the mother, "but secrecy suggests to the mind that there is something to find out that is worth while. A mind can't keep away from a secret. The child has no peace until it finds out about sex, and gets the wrong information, and often learns vicious habits that ruin thousands of children before they learn to think and know."

"Mamma, I want to tell you something," said Johnny very seriously.

"Go ahead, sonny," said the mother.

"Some boys in the school play with their sex-organs."

"That is terrible. They should be looked after until they are cured of the habit, or they will grow up sickly and stunted in mind and body. No organ in our body is made to play with. If we play with our nose, our ear or eye, the organ would soon begin to trouble us so badly that we couldn't think of anything else. It is just the same with the sex-organ. If a teacher found that a child had a sore nose because he didn't keep his fingers away from it, she would send him home and tell his parents to break him of the bad habit. But when the child abuses his sex, which is much more dangerous, she pretends not to see. We need nothing so much in this world as people with a little moral courage. All our organs are equally sacred. Each is for a useful purpose. Our sex-organ is for the purpose of reproducing ourselves when we are grown men and women."

"Are women slaves now?" asked Johnny.

"All workers are practically slaves," said the mother, "but before the machine age, which introduced Capitalism with its factories, where everything is made for profit to the owners, everything was made in the home by hand. The woman worked in the home, where she was the slave of her father or her husband. Now the working woman is forced out of the home to make a living side by side with the man, and all the laws are being changed to suit this new condition. The father and the husband no longer own the daughter and the wife. Some women believe this makes them free. But no man or woman can be free until we have industrial freedom equally for all.

"When a man can't find work he becomes a beggar or a thief, but when a woman can't find work she becomes a white slave. That means that she sells herself sexually, and lives in what is called the red-light district, where she soon dies of nasty diseases. Good looking young men are hired to lure young girls into this sex-slavery, and in this way they get much better pay than honest workers. In our rotten social condition honest work is the cheapest thing in the market. The most wicked dishonesty is regarded with more respect than honest, hard toil, because the master class love profits more than they do the minds and bodies of their workers."

VII

NATURAL AND SOCIAL ADAPTATION

"Do you want to hunt up some tin buckets and go with me out blackberry picking?" asked their mother of Johnny and Anna.

"We do!" they both exclaimed, and danced out into the kitchen to find the buckets.

Very soon they were all three on their way to the blackberry ground. After a while they found a bush full of big, juicy berries. At first many more got into mouths than went into the buckets; but at last each had his bucket full, and they sat down to rest.

"Mamma, why do bushes grow berries?" asked Anna.

"Do you remember why the flowers have such wonderful colors and perfumes?" asked the mother.

"I do," said Johnny. "It is to get the bee to come to carry the pollen-messages from one to another."

"Yes, children, I am glad you remember so well. But the plant family has one more problem to solve. It must provide a way, or rather many ways, by which its children can be taken out into the world where there is room for them to grow. Sometimes, as in the nut-family, they put them in hard shells, so that they can sail in streams of water or be carried by animals. Sometimes they give them wings, which enable the seeds to be carried by the wind; then, again, the plant puts them up in sweet, juicy pulps so that birds and animals and people will pick them and carry them about to eat and then throw

away the seeds. And some of the seeds are protected with a smooth, hard coat and are wedge shaped, so as to enable them to pass through the digestive system without injury. But whenever the plant-children, or seeds, find themselves they must adapt their growth to the soil and conditions or they will die."

"Is it what is called 'the survival of the fittest,' which means that the best and the strongest always succeed?" asked Johnny.

"The theory of the survival of the fittest," said the mother, "simply means that the individual who can best adapt himself to his surroundings or conditions gets along the best and become the strongest; but it doesn't mean that he is therefore the best and the most desirable either as a plant or as an animal or as a man."

"Weeds out in my garden always grow much stronger and bigger than my flowers," said Anna.

"That," said the mother, "is because the seeds of weeds can adapt themselves better to the condition of the soil than the flowers can. But after your flowers get a good start and grow thick and tall, the weeds don't get much of a chance. The conditions have changed, and in the changed condition there is no room for the weeds to get hold."

"But that isn't what I mean, mamma," said Johnny. "I mean the strongest member of the same family get the best of it."

"You mean the best blackberry seed, or the best plum seed, become the biggest and strongest in the bunch?" asked the mother.

"Yes, mamma, that is what I mean."

"It all depends, Johnny. No two seeds are exactly alike in their power to express life equally everywhere. A blackberry plant may grow in one place very nicely, but if it is removed to another place it may not grow half as well because the condition of the soil doesn't suit it."

"Well, doesn't the best man win in this country?" asked Johnny. "That is what my teacher says."

"A man wins in this country, just like he does in any other country, by adapting himself to the social conditions," said the mother. "But all over the world we have very unjust social conditions; so that the man or woman who can be most unjust get along the best and are apt to be the most prosperous. Child-labor is the cheapest and therefore the most profitable for the capitalists. And the man who doesn't care where he gets his money from, no matter if he coins it out of the blood of little children, stands the best chance of winning a rich, idle existence. But such men and woman are worse than brutes, because no brutes live on the young of their kind."

"But why do fathers and mothers send their children to work for them?" asked Anna.

"Because the machines are today so improved that little children can run them to a great extent. The grown men are thrown out of work and can't take care of the children, so the children are forced to go out and hunt jobs. That is why."

"Doesn't the best worker win?" asked Johnny further.

"The best worker wins for a time. He is the last one to be fired from a job, as a rule. But when he can't work at full speed any more he is thrown aside to give room for one who can. The social conditions

used to be so that a good worker could win out by keeping at it, but conditions always changes industrially, because our tools change.

"The workers must adapt themselves to the changed condition, or starve and die. They must take possession of the tools, the mines and the mills, and the land. Then there would be no rich idlers nor any poverty-stricken workers, because each one could get all he socially worked for. But the capitalists are like parasites; they are afraid of losing their victims. That is why they have lies, social lies, told in the schools and churches and printed in the daily papers, to keep us in ignorance of the truth. We workers will have to educate ourselves and our children."

"I am always telling the kids in school about what you and papa tell me," said Johnny.

"That is right, my boy, that is your only salvation in this life, because you can't get away from your class. You will have to fight for it and win with it. The individual in our condition who can fight best for the working class is the fittest for the new order of things to come. The workers have no country; the capitalists own every country. So let them do their own fighting and kill one another if they want to. All the soldiers belong to the working class the world over, and when they are called on to go to war they are asked to murder one another in the interest of the rich."

"I shall never be a soldier," declared Johnny.

"I hope not," said the mother, "a soldier is hired to stand ready to plunge the bayonet in his own father's and brother's breasts whenever the capitalists. through their government, tell him to do so."

VIII

THE TREE BUILDERS

"Do you remember, papa, the Sunday we went with you out in the woods to cut down that tree?" asked Anna.

"Yes, child, and what about it?"

"You promised to tell us the tree's story of its life."

"We hadn't time that day, had we? Well, I cut down a tree this morning out in the yard. Let us go to see what we can learn from it."

"Let us see who can get there first," said Johnny, and bounced ahead of the rest.

"Here we are," said the father. "Now, children, you can see that the tree trunk is formed in rings or circles, beginning with a small one in the center. There are one, two, three, four, five, six."

"It means that the tree is six years old," said Johnny.

"What makes the tree grow in rings like that, papa?" asked Anna.

The father peeled off a fiber lengthwise on the trunk. "This," he said, "is a bundle of long cells. They are like the cells in the stalk of the seaweed, joined end to end, forming the tiniest tubes through which the protoplasm or juice travels up and down. These tube builders have different stuff to carry from the roots. The root-cells dig in the ground and break up minerals to get salts and acids, others hunt for water, but whatever these little plant-miners dig out has to go to the top of the tree to be cooked."

"Cooked?" repeated Johnny surprised, "I never knew the plants did any cooking."

"You know all plant have green leaves or blades," said the father. "Well, this green color is not a tint to make things look pretty to us, but consist of so many little stoves or fireplaces. The fuel is the sunlight. The leaves can swing on their stems, so as to turn always toward the sun. All summer long the cell cooks are busy making broth and stews out of the stuff brought up from the root, mixing it with stuff taken out of the air. When it is done other cells take it back to feed and nourish the whole tree, and to build up new cells. But in the fall when the sun's rays get too feeble to be used for cooking, the cooks shut up shop and retire to the root with all the other workers. The thousand little pathways between the root and the top close up. The green pots turn yellow and rusty and the leaves drop off. In the spring when the sun's rays again begin to get strong, all the tree builders get ready for work. But they find all their paths closed to the top, so they have to build new ones. All around the trunk they build them, forming new fibers, one along side the other. Each year therefore the tree builders form a new ring and new leaves."

"How did the cooks in the tree learn to cook?" asked Anna.

"Just like the other cell-workers learned to do their work. They had to in order to live, as conditions changed.

"We have miners, too, that dig down in the ground," said Johnny.

"Yes, and if it were not for our miners toiling away down in the ground for gold and silver and

iron ore and coal, our present civiliaztion would fall to pieces. Not a single train or steam boat or factory or mill could turn a wheel; nor could the capitalist pile up his gold in dollars and decorate himself in jewelry. No janitors could keep his palaces warm in winter and no cooks could prepare his feasts for him."

"Gee!" said Johnny, "I should think the capitalists would treat the miners pretty well."

"The capitalists treat the miners just like they treat all other workers. They drive them as hard as they can for the least pay. If some of the capitalists should refuse to gouge their workers, their profits would go down, and they would get the enmity of all the other capitalists who would ruin them and drive them down and out. Privately, capitalists are just like any other human beings. Some are good and some are mean, and some are neither good nor bad. But industrially they are all bad. They are social parasites, sucking the strength from the social organism. The workers who pray their masters to be good to them, and ask for a fair day's pay for a fair day's work, have learned less than the cell-workers in the tree, who all work together and tolerate no parasitic bosses. If any parasite enters the tree all the workers fight them with all their might. Of course, sometimes they go down in defeat and the tree dies. The human workers will have to turn in and fight their parasites, and if they are defeated the human race is defeated in its onward march."

"The miners," said Johnny, "should have a right to all the different things they dig out, so they could

exchange it for any other stuff other workers make."

"Sure," said the father, "in that way everything would freely be circulated. All the different workers would know how many hours of social labor they put into a thing, and they would exchange things accordingly. No man ever created a single atom of anything in nature; all he does is to labor to make it useful. For millions of years the little cell-builders labored to store up coal and build up forests and perfect plant life, and here the Rockefellers and Morgans claim that it all belongs to them on account of what they call their superior brains. Poor, silly Rockefeller can't make a hair grow on his own bald head, far less add anything to nature, nor does he expend any labor power to make anything useful."

IX

THE UNSEEN ENEMY OF THE WORKERS

On the pantry shelf stood a cup. A few days before there was a little cream in it. Today Anna looked in that cup and found that it was full of a growth of mold. She took it to her mother and said:

"Look, mamma, this cup is full of woolly stuff."

"I am glad you found it," said the mother. "It is very important for us to know something about that kind of growth. The mold belongs to the vegetable family, but it is a parasite. The trees and the plants we have studied dig for food in the soil and cook it in their green leaves, but this kind of plant never digs or cooks anything. It is like the capitalist class. It takes possession of the creation of others."

"How did it get into the cup?" asked Johnny, who came running in.

"The germs or seeds of these plants float everywhere in the air, especially in low, damp places and in the cities. They are so small that a speck of dust is a big airship to them. In the currents of air they can travel about and settle on any fat morsel of fruit, bread, meat or other substance."

"And do they hurt us if we eat them?" asked Anna.

"I should say they do," answered the mother. "Rotten food is very poisonous. And when anything is decayed it simply means that those germs have taken hold of it and are feeding on it and throwing out their excretion, which smells so bad. Sometimes

they get into canned food and form what is called ptomaine poison, which kills people."

"I shall never eat canned stuff any more," said Johnny disgusted.

"One should never eat canned food unless one has to," said the mother. "The manufacturer of canned food uses stuff that kills the germs so they can't work and spoil things, but that is apt to hurt our stomachs and ruin our digestions. We should have fresh meat, fruits and vegetables to keep strong and healthy."

"Yes," said the father, who came in, "the capitalists not only poison our minds with false ideas to make us willing slaves, but they poison our food to enrich themselves, and advertise it by glaring advertisements as the most healthful stuff on earth. They even poison babies' food. They stop at nothing to make profit. Somebody found out that fruit flavors could be made out of coal tar. This coal-tar flavor is now used in candy and ice cream and so is coal-tar dye. This is very poisonous and often paralyzes a little child, or causes nerve trouble. By poisonous food we are robbed of our health. Then comes the patent medicine manufacturer. He tells us in some more glaring signs that he has put up stuff which will cure us of any sickness. In the state of Maine no liquor could be sold for years. The doctors found that many people went blind in Maine, and when they investigated they found that a much advertised patent medicine was the cause. It contained wood alcohol, a deadly poison. The manufacturer of this deadly medicine claimed to be a very good Christian and went regularly to church."

"Shame on him!" cried Anna.

"Shame on us," said the mother, "for allowing

such business. You see there are many kinds of human parasites. So there are many kinds of these vegetable parasites, and some of them are useful in breaking dead trees and plants and animal bodies up, returning them to the soil."

"Are any of the human parasites useful, I'd like to know?" asked Johnny.

"Our parasites, the capitalist class," said the father, "were useful once. Not so very long ago they were all small shopkeepers, who competed with one another, and worked very hard to get the cheapest goods into the market to under-sell rivals in trade. In that way there was always a call for improved machinery. The market also became flooded with stuff made by the workers, who couldn't buy it, because the money they got back in wages was much smaller in value than the goods they made. When the market became flooded all the machinery stopped and there was a panic. In panics many small capitalists were ruined and gobbled up by bigger ones. In that way all the industries became organized until today they are owned by a few millionaires, some of whom never go near their factories. They just rake in the money sweated out of the workers by the superintendents and foremen, who get big pay for doing the slave-driving."

"When the workers organize and take possession of all the industries, they can elect their own superintendents and foremen. The human parasites will then lose their victims and will have to go to work. Then we will have a chance to deal with our vegetable parasites."

X

THE WONDERFUL BUILDERS IN THE HUMAN BODY

One day Anna went to visit a playmate. Her mother had told her that she could stay all day, but very soon she came back.

"Mary is sick with the measles," she said, looking frightened. "Are measles dangerous, mamma?" she asked.

"If Mary is kept nice and warm, and well taken care of, she will soon be well again," said the mother.

"Why does anybody get sick, and what are those red spots I saw all over Mary's face and hands?"

"Don't ask me two questions at once," said the mother, "for I can only answer one at the time."

"Please, mamma, tell us first why anybody gets sick?" asked Johnny, who had come in, too.

"All right, children," said she. "You remember what we told you about the tiny vegetable parasites that floats most everywhere? Well, there are many kinds of them, but there are only two main divisions. The one we have already told you about feeds on things that no longer live and grow; the other, which I am now going to tell you about, feeds on living, growing bodies only. In olden times it was believed that sickness was caused by evil spirits which got into the body, but science has now found that it is caused by these little parasitic germs."

"And how do they get into the body?" asked Johnny.

"They get into the body in different ways," said

the father, who had joined them. "Sometimes they sail on water and milk, and sometimes they ride upon particles of dust which we breathe in; they get in by different ways."

"What do they do when they are in?" asked Anna eagerly.

"Then they try to find a weak spot to settle in, but if they can't find any place to get a foothold the watchers in the body just kill them, and that is the end of them," said the mother.

"Who are the watchers in the body," asked Johnny.

"Now, we will put our thinking-caps on to find that out," said the father. "You know the builders of the seaweed take in food with their whole surface. Each little cell-builder attends to its own wants. When it gets into colder water, different cells learn to do different work to keep the plant up. This division of labor goes on until the make-up of the seaweed is so changed that it can no longer live in the watery condition, and it becomes a land plant. Some cells dig in the ground as roots, others labor to catch air and sunlight and still other cells carry juice up and down, from root to branch and back again. So that by the time we come to the body of the advanced animal, this division of labor among the cell-builders is so wonderful that we can hardly understand it."

"Yes," said the mother, "it is very much like the division of labor among the workers in human society today. They work in large and small groups in factories and mines and mills and farms, each group turning out something to support the whole of society."

"That is it. Just such factory groups of workers make up and support our bodies," said the father. "The trees have many little mouths to suck in food, but an animal has only one. That one, however, is capable of making the selection of the proper food much better and quicker and easier than all the mouths in a plant. The live fibers of a tree-trunk are tiny tube-cells carrying different kinds of juices to support and build up the tree-body. In our body there is a pumping station, the heart, which pumps the supply of prepared food to every part of the body. This juice called blood is carefully prepared and purified by different organs. The lungs, the liver, the kidneys, the stomach and other organs do their different duties taking in and giving out supplies from the food eaten. But many things get into the body that injure it instead of helping to build it up. So there are workers whose business it is to watch for any enemy that may slip in. Remember, the cell-builders never turn traitors to their own kind. They live and build as a united brotherhood. There are no parasites among them, but they furnish rich ground for parasites of other kinds. And sometimes the body doesn't get the right kind of food and air and the group workers can't turn out all that is needed to keep the body in perfect health. Then there is a chance for the enemy to slip into the blood and sail along till it finds a soft spot. One single disease germ becomes two in a few hours and the two become four and so on, until there is a whole colony feeding on the cells themselves or their food in the blood. Thus they poison it."

"Now we have come to the red spots," said the mother, "that Anna wanted to know about. The

cell-builders in the body are not organized at all like the workers in society, in which each organization of workers has a separate show of its own and deals with different masters. No, they are in one organization and have a perfect system of government. The brain is the governing organ. The brain runs all the way down through the spinal column and from it go out nerves in every direction. These reach every group of cell-workers. Nerves are like telephone and telegraph wires—they carry messages. When there is any distress anywhere in the body, up goes a message to the government, demanding instant attention and relief, and the brain loses no time in sending help. If you cut your finger a sticky juice very soon appears which fills up the cut and draws the wound together. When the measle-germs invade the system a whole army of fighters get orders to kill them. Sometimes there may be five thousand in one single drop of blood, fighting an equal number of the enemy. This fierce fighting causes a great heat in the blood and we say the sick person has a fever. When the good fighters in the body have succeeded in killing the invading enemy, the dead bodies are carted to the surface of the skin and there piled up in little heaps. These little heaps are the red spots."

"That is not all," said the father, "but the brain sends messages to the mouth to call for any food or drink that the workers may need. Very often all the workers are busy fighting the enemy in different ways, so that they have no time to digest any food, and the brain says,—no food. The sick man loses his appetite. Of course, when the body is continually overworked and underfed disease germs of all

kinds make it a stamping ground. And the workers are therefore much more subject to disease than the rich, and, moreover, can't get the right kind of care to get well. So the working-class die in much greater numbers than the upper class before they are old. There is no disease that we can't stamp out and cure under the right condition, but all the knowledge gathered on that line is almost useless now."

"When we organize like the body-builder and have direct control over our government, there will be no capitalist parasites to feed on us, will there, papa?" asked Johnny.

"No, sir, not a bit of it," said the father. "Everybody will have to do his share of some of the needful work that goes to support the social body. But with our labor-saving machinery it will be mere play for a short time each day."

"There is one thing more," said the mother, "that we can learn from the human body-builders. Workers who do an extra amount of work get an extra supply of blood or food. If we use our muscles more than any part of our body they get an extra amount. If we use our brain more, an extra amount of blood supply goes there. On the other hand, the builders who are not called on to do very much work get very scant supply. That is opposite to the rule we have of feeding the idlers and starving the workers. We have turned nature's laws upside down."

XI

THE PROBLEM OF WORKING CLASS CHILDREN

One day the father of Anna and Johnny came home with his tool-case. He looked so worried that both children remained silent instead of asking their usual questions.

"What is the matter, father?" asked the mother. "Did you quit work?"

"Yes, my boss told me that he had been underbidden on several jobs by bigger bosses and hasn't any more work for me now."

"Well, we will have to get along the best way we can," sighed the mother.

"I am fourteen years old," spoke up Johnny, swelling out his chest in a man-like fashion. "Why can't I go to work?"

"You ought to go to school a couple of years longer," said the mother.

"I can finish up in an evening school, can't I?" said Johnny.

"No, my boy, working all day leaves a poor mind for studying at night," said the father. "You must go to school now as long as you can. But when the time comes for you to go to work, what trade would you like to take up, Johnny?"

Johnny thought for sometime then said: "I think I'd like to be a carpenter like you, papa."

"Can't you think of something else to do?" asked the father. "Carpenter work is rather uncertain. There are too many of us."

"Maybe I better take up farming, then."

"Now let me tell you something, boy," said the mother. "Before you were born we were farming on a piece of land we had bought from the railroad company. We had a contract to pay for it in five years. When we reached the land, we found that it was no good without irrigation or watering. So all the farmers got together and built a reservoir and ditches. When we had done all this and made the land much more valuable, the railroad kings demanded much more pay than the contract called for. All the farmers refused to yield to this hold-up. Then the railroad kings sent out the county sheriff and some gun-men with him to oust us or shoot us down. Several farmers were killed, the others got away. We were among those that got away. Then they had it published in the papers that we had started a riot to resist Law and Order."

"But where did the railroad kings get the land? And why did the sheriff get into office when he was such a mean fellow?" asked Johnny.

"The railroad kings," said the father, "got the land from the government for nothing by going to Washington to bribe the men in Congress They got over twenty millions of acres here in California and money enough besides to build the whole railroad, which became their private property. After that they controlled the whole state just like similar robbers did in all the other states."

"Couldn't the farmers and workers vote?" asked Johnny puzzled.

"Yes, we could vote," said the father, "but it paid the politician in Congress much better to be dishonest to the workers than honest under our capitalist system, because the country as a whole were governed by these capitalist agents and their laws. There would be no private gain for the politicians in power to see to it that the workers got the land to use; but there was a whole lot of money for them in giving it to these robbers in million acre lots, and Capitalism tells each man to look out for himself. After the shysters and thieves got the land, they controlled the state officials, no matter whom we voted in."

"My teacher told me that there was a lot of land yet to take up," said Johnny.

"So there is," said the father. "but you can't get to it, without a great deal of expense. It is far from any railroad, and you have to have tools and farm implements, and they are very costly, because they are controlled by another group of profit-mongers. You have to have horses, and you have to have seeds, and money to live on while you raise the first crop. When you get your crop ready for market, you will find that the prices of the market are controlled by another bunch of men who tell you what you may sell your product for. Sometimes you get a little more for it than it cost you to raise it, while at other times you get less. At all times, like the wage worker, you are at the mercy of the capitalist class."

"No matter what I do then," said Johnny dolefully, "it is work, work, for the benefit of the capitalist."

"Yes," said the father, "unless you can show them ways of increasing their profit still more by fooling the people and gouging the workers. Then they will make a pet of you and advertise you as one

of the greatest men of the age, and have it taught in the schools that your case shows that every boy can work himself up to the highest position. The poor school teachers are used as drill masters of ignorance to blind little minds to the facts of life. The children leave school with high hopes, but are beaten down on all sides, until many of them give up in despair and become drunkards and slum dwellers. That gives the capitalistic preacher a chance to preach that all poverty is due to drunkenness, whereas the fact is that the rich drink a good deal more than the poor. They are degenerated by idleness and luxury, just as the workers are degraded by overwork or poverty with its hardship and starvation."

"That is true what papa says about the school teachers," said the mother. "I was a school teacher and had to teach the children falsehoods about life, even after I knew better, because the school is controlled by the capitalists or by people with capitalistic minds."

"That makes me tired," said Johnny. "Can't you turn around in this world without permission from the capitalist class? How big is this class compared to the working class?"

"As big as a puppy dog is compared to an elephant," said the father.

"Gee!" said Johnny, "that is easy. The elephant can throw the pup aside any time."

"Yes," said the mother, "the trouble is that the people of this puppy class spread themselves over acres of ground in big palaces, while the elephant class huddle in tenement houses and little hovels out of sight. At present they have no idea of the immense numbers and power they possess. But they

are fast learning. It is only a matter of time until the world's workers will stand united, and that will be the end of the capitalist's game. The pup will no longer have a seat on the elephant, and make it starve and sleep in the cold. He will have to walk."

"When you go out in the world to work," said the father, "the noblest and grandest thing you can do is to help to organize your class into one solid mass. When that is done the world will be saved from economic injustice, which is the basis of all our injustice."

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